AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
	1 of 24

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. *(If applicable)*
91	See Block 16C		

6. ISSUED BY CODE

John F. Kennedy Space Center, NASA
Procurement Office – ODIN – OP-OS-ODIN
Kennedy Space Center, FL 32899

7. ADMINISTERED BY *(If other than Item 6)* CODE

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State, and Zip Code)*

OAO Corporation
7375 Executive Place
Seabrook, MD 20706-2278

CODE FACILITY CODE

(x) 9A. AMENDMENT OF SOLICITATION NO.

9B. DATED *(SEE ITEM 11)*

10A. MODIFICATION OF CONTRACT/ORDER NO.
NAS5-98144/CC90303B

10B. DATED *(SEE ITEM 13)*
December 1, 2001

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[ ] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers [ ] is extended, [ ] is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning ____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation date, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).

X C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
NAS5-98144 Contract Clause C.7 Technology Refreshment Process and FAR Clause 52.212-4 Contract Terms and Conditions-Commercial Items, (c) Changes

D. OTHER *(Specify type of modification and authority)*

E. **IMPORTANT:** Contractor [ ] is not, [X] is required to sign this document and return ___1___ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

Stennis Space Center --- *ODIN SERVICES*

Technology Infrastructure Upgrades: **Incorporation of 26 SWRs (previously approved Fast Track) identified on Pages 2 and 3**

Change in Delivery Order Price: $183,231.41 (INCREASE)

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*	16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*
Keith L. Spencer Sr. Contract Manager	Penelope A. Ebright Contracting Officer

15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
Keith L. Spencer *(Signature of person authorized to sign)*	5 Sep 2003	BY Penelope A. Ebright *(Signature of Contracting Officer)*	9-8-03

1. In accordance with Master Contract NAS5-98144, C.7, Technology Refreshment Process the technology refreshment services referenced below are herby incorporated into this Delivery Order at a fixed price of $183,231.41. In accordance with Delivery Order CC90303B Part IV, Item 22, "Fast-Track Infrastructure Upgrade Proposal IUP) Process", the following infrastructure upgrades were previously approved as noted.

SWR #	FT Approval Date	Subject	Amount
5400 3N24 00	June 4, 2003	Establishment of Network Monitoring Center in B1110	$11,080.80
5400 3N25 00	June 4, 2003	Installation Of GFE Network Hub and Media Converters to Support Child Care Center	$1,164.08
5400 3N27 00	June 25, 2003	Remove and Relocate Network Switch in B1100 South and Replace with GFE Switch	$6,987.02
BB51 3N24 00 Rev 01	May 22, 2003	Install Cat6 Level 7wires in 43 Locations In B1100 For NASA	$24,890.58
BB54 3N25 00 Rev 01	May 21, 2003	Install Fiber from F-wing to G-wing of B1105 for NASA/CRSP	$8,386.91
COTC 3TRL 01	May 22, 2003	Install T1A Circuit Cards at B1201 And B2204	$1,999.65
CM00 0056 00 (FT approved as CU00 0056 00)	April 11, 2003	Replace Existing Lucent Telephone System with Intecom PointSpan System in B2040	$4,702.76
DB00 0305 00 Rev 1	June 9, 2003	Installation Of Fiber Transceivers and Termination of Fibers in B3203 For NDBC	$1,961.78
DS72 A208 00	June 11, 2003	Install Fiber Between B4995 and B4210 to Support Boeing LAN	$9,806.68
DS72 A209 00	June 11, 2003	Install Fiber Cable Between B4210 and B4220 to Support Boeing LAN.	$7,275.42
J1P0 1R63 00	April 8, 2003	Remove Existing Cat5 And Cat3 Wiring from Modular Furniture on the 2nd, 3rd and 4th Floors of B4122 for Boeing/Rocketdyne	$5,973.85
J1RD AC18 00 Rev 02	April 29, 2003	Install (200) GFE RG59U Coax Cable from B4110 to B4120 for Boeing/Rocketdyne	$12,937.72
MF00 7A61 00 Rev 01	June 10, 2003	Install (1) 4-strand Singlemode Fiber Cable in B3203 and B1103 to Support NMFS Network in B3203.	$3,449.37
NJ00 F2CN 00	April 29, 2003	Install (2) 12-strand Singlemode Fiber Cables from Room 116 of B1201 to New Communications Closets in B1210 for NAVOCEANO.	$9,072.82

SWR #	FT Approval Date	Subject	Amount
NJ00 L3AH 00	March 27, 2003	Provide Oc3 Testing Support For NAVOCEANO	$398.46
NJ00 L3AM 00,Rev 2	June 20, 2003	Install Cat5, and Cat3 Wiring to Support Move of Navy, PSD and SATO travel in B1100	$8,710.25
NM00 3R50 00	June 10, 2003	Installation of Dual PRI Card In Pointspan In B1201 to provide DSN Access to Navy at SSC	$12,479.77
P203 30ES 00	June 9, 2003	Attendance at Oracle Technical Meeting in Austin, TX	$3,066.78
P203 3N19 00 Rev 1	June 4, 2003	Installation of Fiber Cable in B1110 and B4010 to Support Fiber Channel Storage for NASA	$22,065.63
P203 3N23 00 Rev 01	May 21, 2003	Install GFE Network Hub in New Network Closet and Install Cat6 Wiring in B1100	$9,807.45
P203 3WLS 00	May 5, 2003	Attendance at Wireless Enterprise Symposium to Support Blackberry Users	$1,207.70
UM00 0011 02 Rev 1	June 11, 2003	Install (52) Cat5e Wires to (13) Locations in B1103 to support MSET Users	$2,234.66
UV00 CA00 01 Rev 1	June 20, 2003	Installation Of Cable from Room 221 to New Addition of B1103 for Center Of Higher Learning	$3,639.77
WS00 PAA3 00	March 14, 2003	Install 12 Strand Fiber in B1005 and B1008 for NRLDET to Support their Networks	$6,192.11
WS00 PAB3 00 Rev 1	June 10, 2003	Install Cat5 Wiring In Machine Shop In B1005 For NRLDET	$1,749.16
XJCS B493 00 Rev 1	June 20, 2003	Install Circuit Between B3225B and B2201 for EMCS	$1,990.23
		TOTAL	$183,231.41

2. SWR 5400 3N24 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to setup services needed for establishment of Network Monitoring Center which will be used for Network Operations Center personnel as identified in OAO proposal dated May 30, 2003.

a. The contractor shall perform the following tasks:
(1) Install 3 GFE Sunfire280R in building 1110
(2) Load and seed Concord Network Health on one of the Sunfire280R
(3) Load and seed Cisco Works on one of the Sunfire280R
(4) Load and seed Spectrum Enterprise Manager on one of the Sunfire280R

(5) Move the OnSight station to 1110
(6) Ensure ODIN and LMSO administrators have both physical and network access to each system an application.
(7) Install one Cisco 3550 switch in 1100
(8) Update network drawing
(9) Update security plan

b. The contractor shall provide the following material:
(1) 3 each GFE Sunfire280R
(2) 1 each GFE Cisco works software package
(3) 4 each sm 2 meter st-sc fiber jumpers

c. Schedule: This effort shall be complete NLT 10 Weeks after "Fast Track" approval.

3. SWR 5400 3N25 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to activate (1) singlemode fiber circuit from B2120 to B1103 and install (1) GFE 8-port Cisco network hub in B2120 and to connect to singlemode fiber circuit to support Child Care Center connection back to USM network access point in B1103 as identified in OAO proposal dated May 28, 2003. This is

a. The contractor shall perform the following tasks:
(1) Install one GFE Cisco 1538 8 port 10/100 hub in building 2120
(2) Connect the newly install Cisco 1538 to USM's network in building 1103
(3) Remove the Cisco 2950 in building 2120
(4) Update network drawing
(5) Update security plan

b. The contractor shall provide the following material:
(1) 1 each GFE Cisco 1538
(2) 1 each GFE single mode to multi-mode 100Mbits media converters
(3) 1 each GFE single mode to UTP 100Mbits media converters

c. Schedule: This effort shall be complete NLT 2 Weeks after "Fast Track" .approval.

4. SWR 5400 3N27 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to replace the existing Cisco 6509 network switch with a GFE Cisco 4500-6 switch in Room 11128 of B1100 South and relocate the Cisco 6509 switch to room 22228 replacing Fore EX53800 to provide additional ports for NASA users as identified in OAO proposal dated June 16, 2003.

a. The contractor shall perform the following tasks:
(1) Install one GFE Cisco 4550-6 in room 111128 of building 1100.
(2) Ensure the new 4550-6 has 96 10/100 Ethernet ports.
(3) Connect new 4550-6 via dual Ether Channel Gig links to SSC-Tuna.
(4) Place new cross connects to existing users terminated in room 111128 to the network

(5) Move the 6509 currently in room 111128 to and mount in room 22228 of building 1100 south.
(7) Connect the relocated 6509 to the network via an OC-12 ATM uplink.
(8) Place new cross connects to users that will be relocated from the existing ESX-3000 to the 6509 that was relocated from the 1st floor.
(9) Remove and send to redistribution the ESX-3000 currently in room 22228 of building 1100 south.
(10) Update databases
(11) Update network drawing
(12) Update network security plan
(13) Install (3) 110 wiring blocks.
(14) Install (168) solid copper cables from network hub to 110 wiring blocks.
(15) Terminate (168) solid copper cables on 110 wiring blocks installed in item (1) above.
(16) Label wires at both ends

b. The contractor shall provide the following material:
(1) 168 each 35 feet solid copper Cat5e cables (M54AAPBBL-035)
(2) 20 each velcro ties
(3) 17 packs of 110C-4 connectors (073039)
(4) 10 each D-Rings
(5) 4 each 1-meter singlemode ST/ST duplex fiber (151986)
(6) 3 each 110AW2-300 wiring blocks (154071)
(7) 3 packs 188UT1-50 label holder (073093)
(8) 3 each 2-meter singlemode ST/SC duplex fiber (152037)
(9) 2 each 3-meter singlemode ST/SC duplex fiber (152038)

c. NASA will provide the following material

(1) 1 each GFE Cisco Cat4550-6
(2) 1 each GFE WS-4515 Sup IV
(3) 2 each GFE WS-x4448-GB-RJ45 48 port 10/100 blades
(4) 2 each GFE Cat4550-6 power supplies
(5) 2 each GFE LX GBIC's

d. Schedule: This effort shall be complete NLT 10 Weeks after "Fast Track" approval.

5. SWR BB51 3N24 00 Rev 01
The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install (2) Cat6 level 7 wires to (43) locations on the 2nd floor of B1100 to support networks for NASA as identified in OAO proposal dated May 20, 2003.

a. The contractor shall perform the following tasks:
(1) Install (2) Cat6 wires from (43) locations back to room 203.
(2) Install (1) 19" x 84" aluminum rack in room 203.
(3) Install (2) double sided vertical troughs on 19" x 84" aluminum rack.
(4) Install (4) Avaya Visipatch panels on wall.
(5) Install Visipatch distribution rings and horizontal duct on Visipatch panels.
(6) Install (1) 12-strand singlemode fiber cable from room 345 to room 306H.

(7) Install (2) 100A LIU's in room 203 and equip with 10A panels and C3000A-2 couplers.
(8) Install (2) 100A LIU's in room 241 and equip with 10A panels and C3000A-2 couplers.
(9) Install (1) Avaya 4-port singlegang faceplate and place (2) Avaya Cat6 jacks and terminate Cat6 wire to (43) locations.
(10) Terminate 12-strand fiber into singlemode ST connectors and place in 100A LIU's in room 203 and room 241.
(11) Test and label Cat6 wire on both ends.
(12) Test and label fiber on both ends.
(13)Provide OAO with redline drawings showing jack locations and jack numbers.
(14) Remove all Cat3 wiring once new Cat6 has been cutover.
(15) Install new GFE Cisco 4500-6 slot Ethernet switch in new closet
(16) Connect new switch via GigE to NASA's internal router.
(17) Restore service to all costumers currently being serviced.
(18) Return old equipment to be used as spares.
(19) Provide network drawing
(20) Update database
(21) Update security plan
(22) Provide project to NASA prior to start

b. The contractor shall provide the following materials:
(1) 14,000 feet of Avaya 2071 level 7 wire (CMP-00424AVA-7U-06)
(2) 400 feet of corning MIC 12-strand singlemode fiber cable (370-948-SMODE-12)
(3) 200 each Velcro ties
(4) 96 each Avaya level 7 solid copper cords (108793-969-06-25)
(5) 86 each Avaya T568A Cat6 jack (246746) green
(6) 86 each Avaya blank modules (146674)
(7) 70 each Caddy J-hooks (184873)
(8) 64 each 14 feet Cat6 station cords (MM14-AV7E-04)
(9) 43 each Avaya M14L-262 faceplate (197613) white
(10) 24 each Avaya Visipatch distribution rings (532421)
(11) 24 each cool cure consumables (142172)
(12) 24 each P3020A-Z-125 singlemode connectors (157475)
(13) 24 each C3000A-2 singlemode couplers (105263)
(14) 20 each D-rings
(15) 19 packs of 110C-4 connectors for Visipatch panels (073039)
(16) 4 each Avaya 336 pair Visipatch panel (532210)
(17) 4 each Avaya 10A panel for 100A LIU (088980)
(18) 4 each Avaya 100A3 LIU (146050)
(19) 2 each Avaya Visipatch horizontal duct (539650)
(20) 2 each double sided vertical trough (11729-503) (166031)
(21) 2 each ¾" x 4' x 8' sheet of plywood
(22) 1 each CPI 19" x 84" aluminum equipment rack (086047)
(23) 1 each 2 meter single mode ST/SC fiber jumper (152037)
(24) 1 each 3 meter single mode ST/SC fiber jumper (152038)
(25) 1 each 1 meter single mode ST/ST fiber jumper (151986)
(26) 1 each 3 meter single mode ST/ST fiber jumper (151988

c. NASA will provide the following materials:
(1) 1 each GFE Catalyst 4500 Chassis 6 slot

(2) 2 each GFE Catalyst 4500 2800W AC Power Supply with INT Voice
(3) 2 each GFE U.S. Power Cord Twist Lock, NEMA 6 -20 Plug
(4) 1 each GFE Catalyst 4000 Supervisor IV
(5) 1 each GFE Cisco IOS Basic L3 C4000 Sup ¾ 3 DES
(6) 1 each GFE Catalyst 4000 Sup III/IV Compact Flash disk, 128MB Option
(7) 2 each GFE Catalyst 4000 48-port GE Module 10/100/1000 Base-T
(8) 2 each GFE 1000Base-LX/LH long haul GBIC
(9) 1 each GFE UPS
(10) 1 each GFE 8x5xNBD SVC for Catalyst 4500R Series Modular Switch

d.. Schedule: This effort shall be complete NLT 10 Weeks after "Fast Track" approval

6. SWR BB54 3N25 00 Rev 01

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install fiber from new network room in F-wing to several rooms in G-wing of B1105 to support the Visualization Area for NASA/CRSP as identified in OAO proposal dated May 14, 2003.

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a. The contractor shall perform the following tasks:
(1) Install (1) LGX panel in existing equipment rack in new network room.
(2) Install (1) 36-port fiber zone box under computer floor in room G118.
(3) Install (1) 24-strand multimode fiber cable from room G118 to new network room and terminate into ST connectors and place one end in new LGX panel installed in item (1) above and the other end in the fiber zone box that was installed in item (2) above.
(4) Install (2) singlegang faceplates equipped with (1) duplex fiber insert in each and place in room G115.
(5) Install (2) duplex multimode MIC cables from room G115 to new network room and terminate into ST connectors and place one end in new LGX panel installed in item (1) above and the other ends in the fiber inserts installed in item (4) above.
(6) Install (2) singlegang faceplates equipped with (1) duplex fiber insert in each and place in room G121.
(7) Install (2) duplex multimode MIC cables from room G121 to new network room and terminate into ST connectors and place one end in new LGX panel installed in item (1) above and the other ends in the fiber inserts installed in item (6) above.
(8) Relocate existing 12-strand multimode fiber cable from room G114 to room G118 and terminate into ST connectors and place into the new 36-port fiber zone box that was installed in item (2) above.
(9) Relocate existing 12-strand multimode fiber cable down from metal support above the new network room and terminate into ST connectors and place in the LGX panel that was installed in item (1) above
(10) Test and label all fiber cables.
(11) Provide redline drawings to OAO so that site drawings can be updated.

b. The contractor shall provide the following material:
(1) 840 feet of Corning MIC multimode duplex fiber cable (370-949-FDDI-02)
(2) 210 feet of Corning 24-strand multimode MIC fiber cable (370-949-FDDI-2
(3) 88 each P2020C-C-125 multimode ST connectors (118974)
(4) 88 each cool cure consumables (142172)
(5) 44 each C2000A multimode ST couplers (088987)

(6) 36 each Avaya M81ST-B ST adapter (190662)
(7) 10 each Caddy J-hooks (184873)
(8) 4 each IMO II PCB singlegang faceplates (148025)
(9) 4 each IMO II PCB fiber duplex inserts (162979)
(10) 4 each Caddy faceplate clips (157703)
(11) 1 each LST1U-072/7 termination shelf (106722)
(12) 1 pack of 1000ST panels for LST1U-072/7 (106730)
(13) 1 each Avaya M36PA plenum Zone Box (211437)
(14) 18 each 8-meter multimode ST/SC fiber jumpers (199440)
(15) 18 each 2-meter multimode ST/ST fiber jumpers (139055)

c. Schedule: This effort shall be complete NLT 6 Weeks after "Fast Track" approval.

7. SWR COTC 3TRL 01

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to Install T1A circuit cards in existing UMC chassis at B1201 and B2204 to connect the Navy Exchange in B1201 to T272 located next to Child Care Center as identified in OAO proposal dated May 19, 2003.

a. The contractor shall perform the following tasks:
(1) Purchase and install (1) T1A circuit card in B1201 and (1) T1A circuit card in B2204.
(2) Place cross connects in B1201, B1100, B2204 and T272 to activate circuit.
(3) Test and label circuit at both ends.

b. The contractor shall provide the following material:
(1) 2 each T1A circuit cards (0110-0192) Advance Fibre Communications
c. Schedule: This effort shall be complete NLT 4 Days after "Fast Track" approval.

8. SWR CM00 0056 00 (formerly identified and approved as CU00 0056 00)

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to replace current Lucent telephone system with installation of FDLM of existing Intecom PointSpan system in B2040 as identified in OAO proposal dated March 20, 2003.

a. The contractor shall perform the following tasks:
(1) Install (1) FDLM in room 120 communications closet in B2040.
(2) Install (1) 100-pair 110 wiring block.
(3) Install (3) 25-pair single ended cable with 50-pin connector on one end and terminate the end without the 50-pin connector on the 110 wiring block in item (2) above and plug in the 50-pin connectors to the FDLM..
(4) Install the distributed ITE controller card in PointSpan in B2204.
(5) Install fiber jumpers in B2040 and B2204 to activate the FDLM.

b. The contractor shall provide the following material:
(1) 1 each distributed ITE controller card (300-0391-001)

c. Schedule: This effort shall be complete NLT 4 Weeks after "Fast Track" approval.

9. SWR DB00 0305 00 Rev 1

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install fiber transceiver and terminate fibers in B3203 to be used to upgrade circuit between NDBC at B3203 and NASA in B1201 and upgrade connections between B1201 and B3203 for NDBC from 10Mbps connection to 100Mbps as identified in OAO proposal dated May 27, 2003.

a. The contractor shall perform the following tasks:

(1) Upgrade NDBC circuit from 10Mbps to 100Mbps Full Duplex between B1201 and B3203 using 100Mbps fiber transceivers purchased by OAO.
(2) Update drawings and provide copy to NASA Engineer and NDBC Engineer
(3) Update databases.
(4) Update router port from 10Mbps to 100Mbps to 100Base-FX SC SMF.

b. The contractor shall provide the following material:

(1) 3 each Milan MIL-S3413-15 10/100Base-TX to

c. Schedule: This effort shall be complete NLT 4 Weeks after "Fast Track" approval.

10. SWR DS72 A208 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install fiber cable between B4995 and B4210 to support Boeing LAN as identified in OAO proposal dated June 1, 2003.

a. The contractor shall perform the following tasks:

(1) Install (1) 12-strand singlemode fiber cable from room 151 in B4995 to room B103 in B4210.
(2) Install (1) LGX panel in room 151 of B4995.
(3) Install (2) 200A LIU's in room B103 of B4210.
(4) Install (1) 4-strand singlemode fiber cable into ½" flex aluminum conduit and run to room 106 from B103 of B4210.
(5) Install (1) 4-strand singlemode fiber cable into ½" flex aluminum conduit and run to network room on the 2nd floor from room 151 of B4995.
(6) Terminate fiber into ST connectors.
(7) Place one end of 12-strand fiber cable into 200A LIU in room B103 of B4210 and the other end inLGX panel in room 151 of B4995.
(8) Place one end of 4-strand fiber cable into 200A LIU in room B103 of B4210 and the other end in existing LGX in room 106 of B4210.
(9) Place one end of 4-strand fiber cable into new LGX panel installed in item (2) above and the other end in existing LGX panel on the 2nd floor of B4995.
10) Provide fiber jumpers to OAO to make cross connects in the basement of B4210 and room 151 of B4995.
(11) Provide redline drawings to OAO showing route taken with fiber inside of buildings so that communications drawings can be updated.
(12) Test and label fiber at B4995 and B4210.

b. The contractor shall provide the following material:

(1) 1,900 feet of Corning Altos singlemode fiber cable (370-342-ASMODE-12)
(2) 350 feet of Corning singlemode 4-strand MIC cable (370-948-SMODE-04)
(3) 40 each P3020A-Z-125 singlemode ST connectors (157475)

(4) 40 each C3000A-2 singlemode ST couplers (105263)
(5) 40 each cool cure consumables (142172)
(6) 4 EACH Avaya 10A panels (088980)
(7) 3 rolls ½" flex aluminum conduit 100FT/Roll
(8) 2 each Avaya 200A LIU (128826)
(9) 1 each 1-meter ST/ST singlemode fiber jumper (151986)
(10) 1 each 2-meter ST/ST singlemode fiber jumper (151987)
(11) 1 each LST1U-072/7 termination shelf (106722)
(12) 1 pack 1000ST panels (106730)

c. Schedule: This effort shall be complete NLT 8 Weeks after "Fast Track" approval..

11. SWR DS72 A209 00
The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary install fiber cable between B4210 and B4220 to support Boeing LAN as identified in OAO proposal dated June 1, 2003.

a. The contractor shall perform the following tasks:
(1) Install (1) 12-strand singlemode fiber cable from room B103 of B4210 out thru tunnel to room C-506 in B4220.
(2) Install (1) 4-strand singlemode fiber cable into ½" flex aluminum conduit and run to room 106 from B103 of B4210.
(3) Install (1) 4-strand singlemode fiber cable into ½" flex aluminum conduit and run to room C-512 to room C-506of B4995.
(4) Terminate fiber into ST connectors.
(5) Place one end of 12-strand fiber cable into new LIU's that was installed on SWR DS72 A208 00 in room B103 of B4210 and the other end in LGX panel in room 106 of B4210.
(6) Place one end of 4-strand fiber cable into 200A LIU in room B103 of B4210 and the other end in existing LGX in room 106 of B4210.
(7) Place one end of 4-strand fiber cable into existing LGX panel in room C501 and the other end in existing LGX panel in room C512 of B4220.
(8) Provide fiber jumpers to OAO to make cross connects in the basement of B4210 and room C506 of B4220.
(9) Provide redline drawings to OAO showing route taken with fiber inside of buildings so that communications drawings can be updated.
(10) Test and label fiber at B4220 and B4210.

b. The contractor shall provide the following material:
(1) 2,100 feet of Corning Altos singlemode fiber cable (370-342-ASMODE-12)
(2) 100 feet of Corning singlemode 4-strand MIC cable (370-948-SMODE-04)
(3) 40 each P3020A-Z-125 singlemode ST connectors (157475)
(4) 40 each C3000A-2 singlemode ST couplers (105263)
(5) 40 each cool cure consumables (142172)
(6) 1 rolls ½" flex aluminum conduit 100FT/Roll
(7) 1 each 1-meter ST/ST singlemode fiber jumper (151986)
(8) 1 each 2-meter ST/ST singlemode fiber jumper (151987)

c. Schedule: This effort shall be complete NLT 8 Weeks after "Fast Track" approval.

12. SWR J1P0 1R63 00
The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to remove existing Cat5 and Cat3 wiring from modular furniture on the 2nd, 3rd and 4th floors of B4122 for Boeing/Rocketdyne and reinstall into new modular furniture and supplement with additional Cat5 and Cat 3 wiring as identified in OAO proposal dated March 19, 2003.

a. The contractor shall perform the following tasks:
(1) Remove existing Cat5 and Cat3 wiring from (17) modular furniture locations on the 2nd floor.
(2) Remove existing Cat5 and Cat3 wiring from (4) modular furniture locations on the 3rd floor.
(3) Remove existing Cat5 and Cat3 wiring from (5) modular furniture locations on the 4th floor.
(4) Reinstall Cat5 and Cat3 wiring into (17) modular furniture locations on the 2nd floor.
(5) Install (6) new dual Cat5 jacks in the new modular furniture and (2) new dual Cat5 jacks on the South wall in front of elevator on the 2nd floor to be used for printers.
(6) Reinstall Cat5 and Cat3 wiring into (4) modular furniture locations on the 3rd floor.
(7) Install (1) new dual Cat5 jack in office on the West end of 3rd floor.
(8) Reinstall Cat5 and Cat3 wiring into (5) modular furniture locations on the 4th floor.
(9) Install Panduit raceway from ceiling down wall to modular furniture on all floors.
(10) Install Caddy J-hooks in all areas above ceilings and in rooms where there is no ceiling to support the wiring.
(11) Install (8) dual Cat5 jacks on the 2nd floor and place in singlegang faceplate.
(12) Install (1) dual Cat5 jack on the 3rd floor and place in singlegang faceplate.
(13) Test and label new jacks.
(14) Update drawings.

b. The contractor shall provide the following material
(1) 4,000 feet of Belden Cat5 blue PVC wire (CM-00424BEL-5U-06)
(2) 30 each Caddy J-hook (184873)
(3) 25 each Panduit LD10 raceway (131155)
(4) 18 each 110C-4 connector (073039)
(5) 9 each IMO II PCB blank modules (148027)
(6) 9 each IMO II PCB dual Cat5 jacks (248945)
(7) 9 each IMO II PCB singlegang faceplate (148025)
(8) 9 each Panduit deep outlet box (191555)
(9) 1 pack of Panduit TEE's (142140)
(10) 1 pack of Panduit inside corners (131130)
(11) 1 pack of Panduit outside corners (131128)
(12) 1 pack of Panduit end cap (131132)
(13) 1 pack of Panduit right angle (131126)

c. Schedule: This effort shall be complete NLT 4 Weeks after "Fast Track" approval.

13. SWR J1RD AC18 00 Rev 02
The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment

installation) necessary to install (200) GFE RG59U coax cable from B4110 to B4120 for Boeing Rocketdyne in support of the test stand data system as identified in OAO proposal dated April 18, 2003.

a. The contractor shall perform the following tasks:
(1) Install (200) 500 feet reels of GFE RG59U coax cables from room 102B in B4110 thru tunnel to B4120 up to 6th level.
(2) Customer to terminate RG59 connectors on both ends and test.
(3) Give all coax that is leftover to Jim Shows.
(4) Provide OAO with redline drawings showing the route that coax cables were installed.

b. All materials will be provided by customer

c. Schedule: This effort shall be complete NLT 4 Weeks after "Fast Track" approval..

14. SWR MF00 7A61 00 Rev 01
The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install (1) 4-strand singlemode fiber cable in B3203 and B1103 to support NMFS network in B3203 as identified in OAO proposal dated June 2, 2003.

a. The contractor shall perform the following tasks in the following buildings::
Bldg. 3203
(1) Install (1) singlemode 4-fiber PVC MIC fiber cable from room 123 up to 4th floor of crane side of building.
(2) Install (1) Panduit deep outlet box in room 123 and on 4th floor.
(3) Install (1) 4-fiber insert in each outlet box in room 123 and on 4th floor.
(4) Terminate singlemode fiber into ST connectors and place in 4-fiber insert at each end.
(5) Test and label both ends.

Bldg. 1103
(1) Install (1) singlemode 4-fiber PVC MIC fiber cable from room 218D to room 221.
(2) Install (1) Caddy clip in room 218D.
(3) Install (1) Panduit deep outlet box in room 221.
(4) Install (1) 4-fiber insert in each outlet box in room 218D and 221.
(5) Terminate singlemode fiber into ST connectors and place in 4-fiber insert at each end.
(6) Test and label both ends.

b. The contractor shall provide the following material:
(1) 400 feet of 4-fiber singlemode PVC MIC cable (370-947-SMODE-04)
(2) 120 feet of 4-fiber singlemode plenum MIC cable (370-947-SMODE-04)
(3) 16 each P3020A-Z-125 singlemode connectors (157475)
(4) 16 each cool consumables (142172)
(5) 4 each 4-fiber inset (173628)
(6) 4 each IMO II PCB singlegang faceplate (148025)
(7) 3 each Panduit deep outlet boxes (207082)
(8) 2 each 3-meter duplex SM fiber jumper ST/SC (152038)
(9) 1 each 1-meter duplex SM fiber jumper ST/ST (151986)

(10) 1 each 2-meter duplex SM fiber jumper ST/ST (151987)
(11) 1 each 5-meter duplex SM fiber jumper ST/ST (151989)
(12) 1 each caddy clip (157703)

c. Schedule: This effort shall be complete NLT 4 Weeks after "Fast Track" approval.

15. SWR NJ00 F2CN 00
The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install (2) 12-strand singlemode fiber cables from room 116 of B1201 to new communications closets in B1210 for NAVOCEANO as identified in OAO proposal dated April 29, 2003..

a.The contractor shall perform the following tasks:
(1) Install (1) 12-strand singlemode fiber cable from room 116 of B1201 to room 147 unclassified network closet of B1210.
(2) Install (1) 12-strand singlemode fiber cable from room 116 of B1201 to room 147 classified network closet of B1210.
(3) Install (1) Avaya 600B2 fiber shelf in customer owned equipment rack in unclassified network closet of B1210.
(4) Install (1) Avaya 600B2 fiber shelf in customer owned equipment rack in unclassified network closet in room 147 of B1210.
(5) Install (1) Avaya 600B2 fiber shelf in customer owned equipment rack in lassified network closet in room 147 of B1210.
(6) Install (12) singlemode couplers in each 600B2 fiber shelf in B1210.
(7) Terminate singlemode fiber strands into ST connectors and place into fiber shelf in both closets in room 147 of B1210.
(8) Terminate singlemode fiber strands into ST connectors and place into existing LGX panel in room 116 of B1201.
(9) Install (17) dual RJ11 jacks in room 147 back to room 140 and terminate on new 110 wiring block in B1210.
(10) Test and label fiber cable in B1201 and B1210.
(11) Test and label telephone jacks in room 140 and room 147 in B1210.
(12) Provide OAO/ LMIT with redline drawing with jack numbers.

b. The contractor shall provide the following material:

(1) 3400 feet of Corning 12-strand singlemode fiber cable (370-342-ASMODE-12)
(2) 2000 feet of level 3 PVC wire (CM-00424BAG-3U)
(3) 48 each P3020A-Z-125 singlemode fiber connectors (157475)
(4) 48 each C3000A-2 singlemode fiber couplers (105263)
(5) 48 each cool cure consumables (142172)
(6) 34 each IMO II PCB blank modules (148027)
(7) 17 each IMO II PCB dual RJ11 USOC jacks (148035)
(8) 17 each IMO II PCB singlegang faceplates (148025)
(9) 2 each Avaya 600B2 fiber shelf (178260)
(10) 2 each Avaya clear cover plate (179391)
(11) 2 each Avaya routing trough (192718)
(12) 2 each Avaya singlemode ST panel (179382)
(13) 2 each Avaya 110C-4 clips (073039)
(14) 1 each Avaya 110AW2-100 pair wiring block (154069)

c. Schedule: This effort shall be complete NLT 6 Weeks after "Fast Track" approval.

16. SWR NJ00 L3AH 00
The contractor shall provide the labor necessary to provide OC3 testing support in B1201 for NAVOCEANO.

a.The contractor shall perform the following tasks:
(1) Provide support needed to assist in testing the circuit Fiber connections located in Building 1201.

b. No materials are required for this effort.

c. Schedule: This effort shall be complete NLT 4 hours after "Fast Track" approval.

17. SWR NJ00 L3AM 00 Rev 2
The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install Cat5, Cat3 wiring for Navy and SATO Travel to support their relocation in B1100 to allow for the new Navy exchange as identified in OAO proposal dated June 10, 2003.

a. The contractor shall perform the following tasks:
(1) Install Cat5 and Cat3 wiring in room 112 for SATO Travel to work on their own phone system and network system.
(2) Install (2) Cat5 wires in rooms 108 and 110 for NAVO.
(3) Install (1) 12-port Cat5 jack panel in room 138 for SATO Travel.
(4) Test and label Cat5 wiring.
(5) Test and label Cat3 wiring so that outside contractor can relocate phone system.
(6) Remove all old Cat5, fiber and RG58 coax from room s 108, 110 & 112 that feed from old NRLDET network room.
(7) Work will have to be done after hours due to asbestos above the ceilings.

b. The contractor shall provide the following material:
(1) 6,000 feet of Belden Cat5 plenum wire (CMP-00424BEL-5U-06) Blue
(2) 2,000 feet of Avaya Cat3 plenum wire (CMP-00424MAX-3U) white
(3) 250 feet Belden 22AWG stranded 2-pair wire (B88723)
(4) 15 each IMO II PCB blank module (148027)
(5) 15 each IMO II PCB singlegang faceplate (148025)
(6) 14 each IMO II PCB dual T568A/B dual jack (248945)
(7) 8 each USOC TRAC jack ((189465)
(8) 7 each IMO II PCB dual USOC RJ11 jack (148035)
(9) 3 each Panduit outlet boxes (207082)
(10) 2 each Panduit LD10 raceway (131155)
(11) 1 each Panduit outlet box dual gang (203852)
(12) 1 each IMO II PCB dual gang faceplate (221890)

c. Schedule: This effort shall be complete NLT 4 Weeks after "Fast Track" approval.

18. SWR NM00 3R50 00

The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install dual PRI cards in the existing PointSpan system in B1201 in order to provide DSN access to Navy customers at SSC in accordance with DOD requirements as identified in OAO proposal dated May 21, 2003

a. The contractor shall perform the following tasks:
(1) Install (1) dual PRI circuit card in existing PointSpan to support DSN service for the Navy per requirement of DOD.
(2) Connect to a Certified DSN switch in Gulfport using new PRI circuit ordered earlier by CNMOC and waiting to be connected into PointSpan at SSC.
(3) Once circuit has been installed and working with Gulfport and all testing has been completed OAO will re-route DSN access from the present T1 direct connection at SSC to the new PRI connection from Gulfport.

b. The contractor shall provide the following material:
(1) 1 each Card, PRI, ISDN Primary Rate Interface IU, Dual Span W/FW (352 0522 318)

c. Schedule: This effort shall be complete NLT 4 Weeks after “Fast Track” approval.

19. SWR P203 30ES 00
The contractor shall provide the labor necessary to send (1) system administration person to an Oracle technical meeting in Austin, TX as a part of the One Enterprise Solution (OES) /E-presence effort being done across NASA as identified in OAO proposal dated June 4, 2003.

a. The contractor shall perform the following tasks:
(1) 1 each system administration person to attend Oracle meeting in Austin, TX. for (3) days

b. No materials are required for this job:

c. Schedule: This effort shall be complete NLT 4 days after “Fast Track” approval to begin work.

20. P203 3N19 00 Rev 1
The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install fiber cable in B1105, B1110 and B4010 to support Fiber Channel Storage for NASA as identified in OAO proposal dated May 29, 2003.

a. The contractor shall perform the following tasks in the respective buildings:
B1105

(1) Install (1) 19” x 84” aluminum rack in room C311.
(2) Install (1) LGX fiber panel in room C311.
(3) Install (1) LGX fiber panel in room C313 in existing 19” x 84” rack.

(4) Install (1) 24-strand singlemode fiber cable from room C311 in B1105 to room 103 in B1110 and terminate into new LGX panel that was installed in item (2) above and item (1) below under B1110.
(5) Install (1) 24-strand singlemode fiber cable from room C311 to room C313 and terminate at both ends.
(6) Install (1) duplex multimode fiber cable from new LGX panel in room C311 to room B214 and (1) duplex multimode fiber cable to room B216 and terminate into ST connectors and place into a duplex fiber insert in each room.
(7) Terminate the other end into ST connectors and place in LGX panel installed in room C311.
(8) Test and label fiber.
(9) Give redline drawings to OAO so that site drawings can be updated.

B1110
(1) Install (1) LGX fiber panel in existing equipment rack in room 103.
(2) Install (1) LGX panel in existing fiber cabinet in room 101.
(3) Install (1) LGX panel in new equipment cabinets in room 108
(4) Terminate (1) 24-strand singlemode fiber cable into ST connectors that was installed in item (1) of B1105 above and place in new LGX panel in room 103.
(5) Install (1) 24-strand singlemode fiber cable from new LGX panel in room 103 to new LGX panel that was installed in item (2) above in room 101 and terminate fiber into ST connectors and place into LGX panel.
(5) Install (1) 12-strand singlemode fiber cable from existing fiber cabinet in room 101 to existing cabinet in room 108 of B1110 and terminate into ST connectors and place in LGX panel that was installed in item (3) above.
(6) Install (1) LGX panel in new cabinet that was installed by Bob Poncet in room 101.
(7) Install (1) 12-strand singlemode fiber cable from existing fiber cabinet in room 101 into LGX panel installed in item (6) above into cabinet recently installed by Bob Poncet.
(8) Test and label all fibers and LGX panels.

B4010
(1) Install (1) duplex fiber insert with faceplate in Panduit outlet box under floor in room 116.
(2) Install (1) duplex multimode fiber cable from room 116 to room 117 and terminate into ST connectors and place one end in Panduit outlet box in room 116 and in LGX panel in room 117.
(3) Test and label.

b. The contractor shall provide the following material:
(1) 1,800 feet of Corning 24-strand singlemode outdoor cable (370-342-ASMODE-24)
(2) 500 feet of Corning duplex MIC multimode fiber cable (370-949-FDDI-02)
(3) 200 feet of Corning 24-strand singlemode MIC fiber cable (370-948-SMODE-24)
(4) 180 each cool cure consumables (142172)
5) 168 each P3020A-Z-125 singlemode ST connectors (157475)
(6) 168 each C3000A-2 singlemode ST couplers (105263)
(7) 100 feet of Corning 12-strand singlemode MIC fiber cable (370-948-SMODE-12)
(8) 12 each P2020C-C-125 multimode ST connectors (118974)

(9) 12 each C2000A multimode ST couplers (088987)
(10) 12 each 2-meter SM ST/LC fiber jumper (LCCSTCD2M-UPSM)
(11) 12 each 2-meter SM ST/ST fiber jumper (151987)
(12) 9 each 3-meter multimode ST/LC fiber jumpers (LCCSTPD-3M)
(13) 8 each IMO II PCB blank modules (148027)
(14) 5 each LST1U-072/7 termination shelf (106722)
(15) 5 packs of 1000ST panels for LST1U-072/7 termination shelf (106730)
(16) 4 each IMO II PCB singlegang faceplate (148025)
(17) 4 each IMO II PCB duplex fiber insert (162979)
(18) 3 each Caddy faceplate clips (157703)
(19) 2 each double sided vertical trough (166031)
(20) 2 each 5-meter SM ST/LC fiber jumper (LCCSTCD5M-UPSM)
(21) 1 each CPI 19" x 84" aluminum rack (086047)
(22) 1 each 2-meter multimode ST/LC fiber jumper (LCCSTPD-2M)
(23) 1 each 5-meter multimode ST/LC fiber jumper (LCCSTPD-5M)
(24) 1 each Panduit deep outlet box (205872)

c. Schedule: This effort shall be complete NLT 6 Weeks after "Fast Track" approval.

21. P203 3N23 00 Rev 01
The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install new network hub in new network closet on the 2nd floor old section of B1100 and install Cat6 wiring in Training room 211 in old section of B1100 to upgrade from Cat3 wiring for NASA as identified in OAO proposal dated May 14, 2003.

a. The contractor shall perform the following tasks:
(1) Install (6) Cat6 wires to (7) locations in room 211 back to room 203.
(2) Terminate Cat6 wires on existing Visipatch panels that were installed on P203 3N24 00.
(3) Install (48) Cat6 solid copper cables from new network hub to existing Visipatch panels in room 211.
(4) Install caddy J-hooks in ceiling to hold Cat6 wiring between room 211 and room 203.
(5) Install (7) singlegang faceplates e/w (6) Cat6 T568 jacks in room 211 and terminate Cat6 wiring.
(6) Test and label Cat6 wiring at both ends.
(7) Remove old Cat3 wiring once Cat6 has been cutover.
(8) Install new GFE network hub in room 203.
(9) Install fiber jumpers to activate GFE network hub.
(10) Place cross connect jumpers to activate new jacks.
(11) Remove old cross connect jumpers from existing network hub in room 201A
(12) Test each jack to make sure that it works with new network hub.

b. The contractor shall provide the following material
(1) 4,000 feet of Avaya plenum 2071 level 7 wire (CMP -00424AVA-7U-06)
(2) 75 each Velcro ties
(3) 48 each Avaya level 7 solid copper cords (108793-969-06-25)
(4) 42 each T568 Cat6 jacks (246746) Green
(5) 42 each 14 feet Cat6 station cords (MM14-AV7E-04) Green

(6) 30 each Caddy J-hooks (184873)
(7) 9 packs of 110C-4 connectors for Visipatch panels (073039)
(8) 7 each Avaya M16L-262 faceplates (197619) White

c. NASA will provide the following material:
(1) New network hub and associated hardware and maintenance.
(2) UPS for the new network hub.
(3) Electrical outlets for the UPS and new network hub.

d. Schedule: This effort shall be complete NLT 10 Weeks after "Fast Track" approval.

22. P203 3WLS 00
The contractor shall provide the labor necessary to attend the Wireless Enterprise Symposium in New Orleans on May 6th and 7thin support of the BlackBerry users at SSC as identified in OAO proposal dated May 5, 2003.

a. The contractor shall perform the following tasks:
(1) Attend Wireless Enterprise Symposium in New Orleans on May 6th and 7th in support of the BlackBerry users at SSC.

b. The contractor shall provide the following material:
(1) Registration fees to the Wireless Enterprise Symposium for May 6th and 7th.

c. Schedule: This effort shall be complete NLT 1 Week after "Fast Track" approval.

23. UM00 0011 02 Rev 1
The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install (2) Cat5e wires to (13) locations on the 2nd floor to support MSET users as identified in OAO proposal dated June 10, 2003..

a. The contractor shall perform the following tasks:
(1) Paint and hang plywood in room 221.
(2) Pull (52) Cat5e wires from room 223 over to room 221.
(3) Install (2) 110 wiring blocks in room 221. Install one on the northeast corner and one on the northwest corner.
(4) Terminate (52) existing Cat5 wires on (1) 110 wiring block.
(5) Install (52) Cat5e wires from the northeast corner of room 221 to the northwest corner of room 221.
(6) Terminate both ends of wiring on 110 blocks.
(7) Test and label Cat5 wiring. Label jacks and 110 wiring blocks.

b. The contractor shall provide the following material:
(1) 2,000 feet of Belden plenum Cat5e wire (CMP-00424BEL-3U) blue
(2) 30 each Velcro ties
(3) 11 packs of 110C-4 connectors for 110 wiring blocks (073039)
(4) 8 each D rings
(5) 2 each 110AW2-300 wiring blocks (154071)
(6) 1 sheet of ¾"x4'x8' plywood

c. Schedule: This effort shall be complete NLT 1 Week after “Fast Track” approval.

24. SWR UV00 CA00 01 Rev 1
The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install (1) 200-pair copper cable from room 221 to new addition of B1103 to be used for telephone service for Center of Higher Learning as identified in OAO proposal dated May 30, 2003.

a. The contractor shall perform the following tasks:
(1) Install (1) 200-pair plenum copper cable from room 221 down to server room in new addition of B1103 to support telephones.
(2) Install (1) 300-pair 110 wiring block and (1) 188B2 wire organizer in server room in new addition and terminate one end of 200-pair copper cable to be used for telephones.
(3) Install (1) 300-pair 110 wiring block and (1) 188B2 wire organizer in room 221 and terminate one end of 200-pair copper cable to be used for telephones.
(4) Test and label 200-pair copper cable.
(5) Provide OAO with a redline drawing showing locations of jacks and jack numbers.

b. The contractor shall provide the following material:
(1) 240 feet of 200-pair plenum copper cable (CMP-20024SAC-3)
(2) 5 packs of 110C-5 connectors (061268)
(3) 3 each Avaya 188B2 wire organizer (112052)
(4) 2 each Avaya 300 pair terminal block (154071)

c. Schedule: This effort shall be complete NLT 6 Weeks after “Fast Track” approval .

25. SWR WS00 PAA3 00
The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install 12-strand fiber in B1005 and B1008 for NRLDET to support their networks as identified in OAO proposal dated February 24, 2003..

a. The contractor shall perform the following tasks in the respective buildings:
B1005
(1) Install (1) 12-strand multimode fiber cable from room C35 to room D26
(2) Install (2) 100A LIU’s in room D26.
(3) Install (2) 10A panels in 100A LIU’s room D26.
(4) Install (12) multimode ST couplers in the 100A LIU’s in room D26 and (12) multimode ST couplers in existing LGX panel in room C35.
(5) Install (1) 12-strand multimode fiber cable from room C35 to room C30.
(6) Install (2) 100A LIU’s in room D30.
(7) Install (2) 10A panels in 100A LIU’s in room D30.
(8) Install (12) multimode ST couplers in the 100A LIU’s in room D30 and (12) multimode ST couplers in existing LGX panel in roomC35.
(9) Terminate fiber into ST connectors in C35, D26 and D30.
(10) Test and label fiber in C35, D26 and D30.
(11) Provide redline drawing to OAO.

B1008
(1) Install (1) 12-strand multimode fiber cable from room 100 to room 104.
(2) Install (2) 100A LIU's in room 100A.
(3) Install (2) 10A panels in LIU's in room 100A.
(4) Install (12) multimode ST couplers in the 100A LIU's in room 100.
(5) Install (12) multimode ST couplers in existing LGX panel in room 104.
(6) Terminate fiber into ST connectors in room 100 and room 104.
(7) Test and label fiber in room 100 and room 104.
(8) Provide redline drawing to OAO.

b. The contractor shall provide the following material:
(1) 500 feet Corning multimode MIC fiber cable (370-947-FDDI-12)
(2) 72 each P2020C-C-125 multimode ST connectors (118974)
(3) 72 each C2000A multimode ST coupler (088987)
(4) 72 each cool cure consumables (142172)
(5) 6 each Avaya 100A3 LIU (146050)
(6) 6 each Avaya 10A panels for LIU (088980)
(7) 6 each 1000ST panels (106730)

c. Schedule: This effort shall be complete NLT 4 Weeks after "Fast Track" approval.

26. SWR WS00 PAB3 00 Rev 1
The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install shielded Cat5 wiring in B1005 to support new machine in machine shop for NRLDET as identified in OAO proposal dated May 30 2003.

a. The contractor shall perform the following tasks:
(1) Install (2) Cat5 shielded twisted pair wires to (2) locations in room D-110.
(2) Install (1) wall mount 12-port patch panel in room D-8.
(3) Install (1) Panduit outlet box with Panduit raceway in room D-110 and place (2) Panduit shielded jacks and (2) blanks in each Panduit 4-port faceplate.
(4) Install (1) ground bus bar kit and ground rod in room D-8 to be used to terminate drain wire.
(5) Terminate Cat5 wires on new patch panel.
(6) Test and label both ends.
(7) Provide redline drawings to OAO to update site drawings.

b. The contractor shall provide the following material:
(1) 2,000 feet of shielded Cat5 wire (CM-00424CSGN-5B-06)
(2) 30 feet ground wire
(3) 8 each Panduit shielded Cat5 jacks (539374)
(4) 4 each Panduit faceplate blanks
(5) 4 each PanduitLD5 raceway 6 feet (131156)
(6) 2 each Panduit 4-port faceplate (222194)
(7) 2 each Panduit outlet boxes (207089)
(8) 1 each Panduit 12-port snap in patch panel (201078)
(9) 1 each CPI ground bus bar kit (252914)
(10) 1 each 8 feet ground rod

c. Schedule: This effort shall be complete NLT 4 Weeks after "Fast Track" approval.

27. SWR XJCS B493 00 Rev 1
The contractor shall provide the labor (including, but not limited to, engineering, configuration management, user coordination/scheduling, wiring/cabling and equipment installation) and materials necessary to install circuit between B3225B and B2201 to be used to test EMCS communications between buildings as identified in OAO proposal dated May 27, 2003..

a. The contractor shall perform the following tasks:
(1) Install (1) ISU128 modem in B3225B.
(2) Install (1) ISU128 modem in B2201 in EMCS area.
(3) Install wiring and jack at B3225B.
(4) Place cross connects in B4010, B3220, B3225B and B2201 to activate circuit.
(5) Test with EMCS to make sure the circuit works.

b. The contractor shall provide the following material
(1) 1 each Adtran ISU128 stand alone modem (1202029L2)
(2) 1 each Adtran ISU128 rack mount modem (1200087L1)

c. Schedule: This effort shall be complete NLT 2 Weeks after “Fast Track” approval.

28. Part II "Contract Administration Data", Item 4, is revised as indicated below to incorporate the increase of $183,231.41 for these infrastructure upgrades:

4. <u>TOTAL DELIVERY ORDER VALUE</u> (through Mod No. 91)

Ordered Seats and Services	$ 7,070,923.20
Catalog Actuals	$ 413,263.93
Specialized Services Actuals	$ 8,850.00
Infrastructure upgrades	$ 2,213,273.90
Fast Track Mods Authorized	$ -
Subtotal	$ 9,706,311.03
Less credits	$ (2,625.55)
Less retainage not earned	$ (74,871.83)
Subtotal	$ 9,628,813.65
Seats/service levels projected through 11/30/04	$ 6,599,620.27
Total Estimated Delivery Order Value	$ 16,228,433.92

29. Part V "Technology Infusion (Infrastructure Upgrades)", Item 2 is modified to include the subject infrastructure upgrades. The signed date and completion date will be completed in a future infrastructure upgrade modification.

Mod. No.	Description of Work	Date Signed	Completion Date	Modification Value
91	**SWR 5400 3N24 00** Establishment of Network Monitoring Center in B1110			$11,080.80
91	**SWR 5400 3N25 00** Installation of GFE Network Hub And Media Converters to Support Child Care Center			$1,164.08
91	**SWR 5400 3N27 00** Remove and Relocate Network Switch in B1100 South and Replace with GFE Switch			$6,987.02
91	**SWR BB51 3N24 00 Rev 01** Install Cat6 Level 7wires In 43 Locations In B1100 For NASA			$25,890.58
91	**SWR BB54 3N25 00 Rev 01** Install Fiber from F-wing to G-wing of B1105 for NASA/CRSP			$8,386.91
91	**SWR COTC 3TRL 01** Install T1A Circuit Cards at B1201 and B2204			$1,999.65
91	**SWR CM00 0056 00 Rev 1** (FT approved as CU00 0056 00) Replace Existing Lucent Telephone System with Intecom PointSpan System inB2040			$4,702.76

Mod. No.	Description of Work	Date Signed	Completion Date	Modification Value
91	**SWR DB00 0305 00 Rev 1** Installation of Fiber Transceivers and Termination of Fibers In B3203 For NDBC			$1,961.78
91	**SWR DS72 A208 00** Install Fiber Between B4995 And B4210 to Support Boeing LAN.			$9,806.68
91	**SWR DS72 A209 00** Install Fiber Cable Between B4210 And B4220 to Support Boeing LAN.			$7,275.42
91	**SWR J1P0 1R63 00** Remove Existing Cat5 And Cat3 Wiring from Modular Furniture on the 2nd, 3rd and 4th Floors of B4122 for Boeing/Rocketdyne			$5,973.85
91	**SWR J1RD AC18 00 Rev 02** Install (200) GFE RG59U Coax Cable from B4110 to B4120 for Boeing/Rocketdyne			$12,937.72
91	**SWR MF00 7A61 00 Rev 01** Install (1) 4-strand singlemode fiber cable in B3203 and B1103 to support NMFS network in B3203.			$3,449.37
91	**SWR NJ00 F2CN 00** Install (2) 12-strand singlemode fiber cables from room 116 of B1201 to New Communications Closets in B1210 for NAVOCEANO.			$9,072.82
91	**SWR NJ00 L3AH 00** Provide OC3 Testing Support for NAVOCEANO in B1201			$398.46
91	**SWR NJ00 L3AM 00 Rev 2** Install Cat5, and Cat3 Wiring to Support Move of Navy, PSD and SATO travel in B1100			$8,710.25
91	**SWR NM00 3R50 00** Installation of Dual PRI Card In Pointspan In B1201 to provide DSN Access to Navy at SSC			$12,479.77
91	**SWR P203 30ES 00** Attendance at Oracle Technical Meeting in Austin, TX			$3,066.78
91	**SWR P203 3N19 00 Rev 1** Installation of Fiber Cable in B1110 and B4010 to Support Fiber Channel Storage for NASA			$22,065.63
91	**SWR P203 3N23 00 Rev 01** Install GFE Network Hub in New Network Closet and Install Cat6 Wiring in B1100			$9,807.45
91	**SWR P203 3WLS 00** Attendance at Wireless Enterprise Symposium to Support Blackberry Users			$1,207.70
91	**SWR UM00 0011 02 Rev 1** Install (52) Cat5e Wires To (13) Locations In B1103 to support MSET Users			$2,234.66
91	**SWR UV00 CA00 01 Rev 1** Installation of Cable Form Room 221 to New Addition Of B1103 for Center of Higher Learning			$3,639.77

91	**SWR WS00 PAA3** 00 Install 12 Strand Fiber in B1005 and B1008 for NRLDET to Support Their Networks			$6,192.11
91	**SWR WS00 PAB3 00 Rev 1** Install Cat5 Wiring in Machine Shop in B1005 for NRLDET			$1,749.16
91	**SWR XJCS B493 00 Rev** 1 Install Circuit Between B3225B And B2201 for EMCS			$1,990.23

30. Payment Schedule: Invoicing and Payment for this modification will be made in accordance with Master Contract NAS5-98144, FAR 52.212-4: Commercial Items (May 1997) (Modified).

31. Reporting requirements: The contractor shall provide monthly status reports to the SSC Alternate DOCOTR, with a copy to the DOCO. These reports shall include, as a minimum, installation progress, and potential problem areas.

32. As reflected in Block 8 of Page 1, the address of OAO Corporation has been changed to:

    OAO Corporation
    7375 Executive Place
    Seabrook, MD 20706-2278

33. In consideration of the modification agreed to herein as complete equitable adjustment for the changes set forth, the Contractor hereby releases the Government from any and all liability under this delivery order for further equitable adjustments attributable to such facts or circumstances giving rise to these changes.

34. All other terms and conditions of this Delivery Order remain unchanged and in full force and effect.